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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,180	12/30/2003	Masayuki Tsunekawa	TJK/441	7871
27717	7590	08/09/2007		
SEYFARTH SHAW LLP 131 S. DEARBORN ST., SUITE2400 CHICAGO, IL 60603-5803			EXAMINER ECHELMEYER, ALIX ELIZABETH	
			ART UNIT 1745	PAPER NUMBER
			MAIL DATE 08/09/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/749,180	Applicant(s) TSUNEKAWA ET AL.	
	Examiner Alix Elizabeth Echelmeyer	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response

1. This Office Action is in response to the remarks filed May 17, 2007. No claims have been amended, added or cancelled. Claims 1-4 are pending and are rejected finally for the reasons given below.

Specification

2. The objections to the specification from the Office Action mailed November 15, 2006 are maintained. The amendment filed is noncompliant and the amended specification will not be entered, see 37 C.F.R. 1.121 and below:

§ 1.121 Manner of making amendments in applications.

(b) Specification . Amendments to the specification, other than the claims, computer listings (§ 1.96) and sequence listings (§ 1.825), must be made by adding, deleting or replacing a paragraph, by replacing a section, or by a substitute specification, in the manner specified in this section.

(1) Amendment to delete, replace, or add a paragraph . Amendments to the specification including amendment to a section heading or the title of the invention which are considered for amendment purposes to be an amendment of a paragraph, must be made by submitting:

(i) An instruction, which unambiguously identifies the location, to delete one or more paragraphs of the specification, replace a paragraph with one or more replacement paragraphs, or add one or more paragraphs;

(ii) The full text of any replacement paragraph with markings to show all the changes relative to the previous version of the paragraph. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strikethrough cannot be easily perceived;

(iii) The full text of any added paragraphs without any underlining; and

(iv) The text of a paragraph to be deleted must not be presented with strike-through or placed within double brackets. The instruction to delete may identify a paragraph by its paragraph number or include a few words from the beginning, and end, of the paragraph, if needed for paragraph identification purposes.

(2) Amendment by replacement section . If the sections of the specification contain section headings as provided in § 1.77(b), § 1.154(b), or § 1.163(c), amendments to the specification, other than the claims, may be made by submitting:

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- (i) A reference to the section heading along with an instruction, which unambiguously identifies the location, to delete that section of the specification and to replace such deleted section with a replacement section; and;
 - (ii) A replacement section with markings to show all changes relative to the previous version of the section. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived.
- (3) Amendment by substitute specification . The specification, other than the claims, may also be amended by submitting:
- (i) An instruction to replace the specification; and
 - (ii) A substitute specification in compliance with §§ 1.125(b) and (c).
- (4) Reinstatement of previously deleted paragraph or section . A previously deleted paragraph or section may be reinstated only by a subsequent amendment adding the previously deleted paragraph or section.
- (5) Presentation in subsequent amendment document . Once a paragraph or section is amended in a first amendment document, the paragraph or section shall not be represented in a subsequent amendment document unless it is amended again or a substitute specification is provided.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Reimers et al. (US Patent 6,416,904).

Reimers et al. teach a design and method for making calendered, double side segment coated webs such as for use in non-aqueous rechargeable lithium ion batteries (abstract). Reimers et al. teach a thin metal foil web that is coated with a substance containing an electroactive powder, such as one that is used in lithium ion batteries (column 4 lines 45-57).

Reimers et al. teach that the coating is applied in segments, and that the segments on opposite sides of the web are staggered. Reimers et al. further teach that when the staggering is at 2 mm, this is most effective for preventing damage during production, when the web is calendered to press the coated segments (column 5 lines 3-5).

The method for producing this electrode as taught by Reimers et al. includes double side segment coating (column 6 lines 35-67). The segmented coating is applied to a first side of the web. The web is then turned over and run through the same coating machine to produce coated segments on the opposite side. The web is calendered, or pressed.

Reimers et al. disclose a method for forming electroactive segments wherein the leading edges and trailing edges of the coating segments are on a first side of the current collector are proximate the leading edges and trailing edges, respectively, on the second side of the current collector (column 3 lines 45-55).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reimers et al. in view of Fukumura et al. (US Patent 6,027,835).

The teachings of Reimers et al. as discussed above are incorporated herein.

Reimers et al. teach that the electrode may be spirally wound to create a jellyroll battery (column 8 lines 6-7). The battery may be housed in a cylindrical or prismatic case, and a separator is wound between the anode and cathode (column 2 lines 1-8).

Reimers et al. fail to teach that the electrolyte is poured into the battery case that is then sealed.

Fukumura et al. teach a battery containing an electrode sheet having shifted electrode segments coated on it (abstract). The sheets are wound with a separator and placed in a battery can. An electrolyte is then poured into the can, and it is sealed (Figure 2; column 5 lines 27-40).

It would be desirable to seal the battery case containing the wound assembly and electrolyte, since sealing would prevent contamination or leakage of the electrolyte and enable the battery to be used in implantable or underwater applications.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to seal the battery case containing the wound assembly and electrolyte, since sealing would prevent contamination or leakage of the electrolyte and enable the battery to be used in implantable or underwater applications.

Reimers et al. further teach that various lithium salt and nonaqueous electrolyte solvent combinations may be used in the electrolyte.

Reimers et al. do not explicitly teach that the nonaqueous solvent is organic.

Fukumura et al. teach several examples of organic solvents for electrolytes in lithium batteries (column 7 lines 7-29).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use an organic solvent in the electrolyte because the organic solvent would be chemically compatible with the lithium ion battery components of Reimers et al. which requires a nonaqueous solvent.

Response to Arguments

7. Applicant's arguments filed May 17, 2007 have been fully considered but they are not persuasive.

Applicants state that the instant invention has a "larger protuberance" on the "starting side" of the coating as opposed to the trailing edge. The examiner agrees that this is disclosed in the instant specification and in the drawings, for example Figures 1 and 2. Applicants further present arguments concerning why the protuberance, positioned at the leading edge of the coating of electrode active material, makes their invention superior when the coated current collector is calendared. However, Applicants *do not claim* the protuberance at the leading edge.

Applicants also present the argument that Reimers et al. do not teach the method of the instant invention, specifically, that the running direction during coating is the same for both sides of the web. The examiner would like to point out that, since claims 1 and 3 are product claims; therefore, the method by which they are made is not material to the final product since the final product is taught in Reimers et al. Additionally, Reimers

et al. do, in fact, teach that the running direction is the same for coating both sides of the web. As in Reimers et al., it is conventional to form as calendared, segment coated, continuous web wherein the segments are coated such that the leading and trailing edges of the first and second sides are proximate (column 3 lines 45-55).

Applicants also argue that, the shift between the edges of the coatings is a shift of a leading edge relative to the opposite leading edge. It is the position of the examiner that, since the leading and trailing edges of the segments of Reimers et al. are identical, it is immaterial which edge was coated first.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alix Elizabeth Echelmeyer whose telephone number is 571-272-1101. The examiner can normally be reached on Mon-Fri 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Susy N. Tsang-Foster can be reached on 571-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alix Elizabeth Echelmeyer
Examiner
Art Unit 1745

aee



SUSY TSANG-FOSTER
PRIMARY EXAMINER